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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/776,538

02/12/2004

Chuang-Hua Chuch

3722-0177P

4152

2292 7590 02/04/2008
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EXAMINER

WASHINGTON, JAMARES

ART UNIT

PAPER NUMBER

2625

NOTIFICATION DATE

DELIVERY MODE

02/04/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/776,538

Applicant(s)

CHUEH, CHUANG-HUA

Examiner

Jamares Washington

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

Applicant's amendment and response received on September 4, 2007 have been entered. Claims 1-10 are pending with claims 1, 5, 6, and 10 having been amended. Applicant's newly amended claims and arguments are addressed hereinbelow.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3, and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Ching-Fu Chung et al (US 6710899 B2)

Regarding claim 1, Chung et al discloses a scan method capable of enhancing scan quality, the scan method comprising the steps of:

(a) moving one of a document and a scan module by a predetermined distance from the other (Col. 3 lines 58-61);

(b) stabilizing the movement of one of the document and the scan module and consequently making the document and the scan module relatively stationary to each other after the step (a) (Col. 3 lines 61-63);

(c) illuminating the document with light rays from a light source (Col. 3 lines 61-64), and receiving a stable image signal of the document by utilizing an image sensor of file scan module after the step (b) (Col. 3 lines 64-66);

(d) terminating the receiving operation of the image sensor and shutting off the light source after the image sensor has received the stable image signal for a first predetermined period of time so that an image signal corresponding to a line of the document is obtained (Col. 3 lines 66-67);

(a') moving one of the document and the scan module by the predetermined distance from the other after the step (d) (Col. 3 line 67- Col. 4 line 2);

(b') stabilizing the movement of one of the document and the scan module and consequently making the document and the scan module relatively stationary to each other after the step (a') (Fig. 8 "Is the scanning completed? – No – Drive scanning module to a scanning position...");

(c') illuminating the document with the light rays from the light source, and receiving another stable image signal of the document by utilizing the image sensor of the scan module

after the step (b') (Repeating step (b) above for the next scan position (line) of the document as shown in Fig. 8); and

(d') terminating the receiving operation of the image sensor and shutting off the light source after the image sensor has received the stable image signal for the first predetermined period of time so that another image signal corresponding to another line of the document is obtained (Repeating step (d) above for the next scan position (line) of the document as shown in Fig. 8 until the entire document is scanned).

Regarding claim 3, Chung et al discloses the scan method according to claim 1, wherein the step (a) comprises a step of:

moving the scan module by the predetermined distance from the stationary document (Col. 3 lines 58-61).

Regarding claim 4, Chung et al discloses the scan method according to claim 1, wherein the light source is a light-emitting diode (Col. 2 lines 59-62).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al in view of Mark J. Bianchi et al (US 5744795)

Regarding claim 2, Chung et al discloses the scan method according to claim 1.

Chung fails to disclose or suggest wherein the step (a) comprises a step of feeding the document to generate the predetermined distance from the stationary scan module.

Bianchi in the same field of endeavor discloses feeding the document to generate the predetermined distance from the stationary scan module (Col. 4 lines 33-40 and Fig. 2 wherein a light source is strobed in sync with CCD sampling time to obtain an image.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the method as disclosed by Chung wherein scan quality is enhance through a plurality of steps to utilize the teachings of Bianchi et al wherein a document is fed to generate a predetermined distance form a stationary scan module because it is readily apparent that it would be straight forward to implement the invention in an automatic document feeder (Col. 4 lines 34-36, Bianchi).

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung et al. in view of Nobukazu Suzuki (US 6995877) and Yoshio Wakui (US 6563610 B1).

Regarding claim 5, Chung et al discloses the scan method according to claim 1, further comprising the steps of:

executing the steps (a) to (d) (see rejection of claim 1).

Chung fails to disclose or suggest receiving a first mode signal or a second mode signal selected by a user.

Suzuki, in the same field of endeavor, teaches receiving a first mode signal or a second mode signal selected by a user (Fig. 3 Connecting external power supply or not which will advance the image processing apparatus to either normal or power saving mode).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the scan method as disclosed by Chung wherein scan quality is enhanced to utilize to teachings of Suzuki wherein a first or second mode signal is selected by a user to provide a means for saving power to the apparatus if needed.

Therefore executing steps (a) to (d) when the first mode signal is received (First mode signal as taught by Suzuki would be the external power supply not being connected); and executing the following steps when the second mode signal is received (Second mode signal as taught by Suzuki would be the external power supply being connected) would be implemented.

Chung fails to disclose executing the following steps when the second mode signal is received:

(a1) continually illuminating the document with the light rays from the light source;

(b1) moving one of the document and the scan module by the predetermined distance from the other, and receiving a standard image signal of the document by utilizing the image sensor of the scan module;

(c1) stabilizing the movement of one of the document and the scan module and consequently making the document and the scan module relatively stationary to each other after the step (b1); and

(d1) terminating the receiving operation of the image sensor after the image sensor has received the standard image signal for a second predetermined period of time after the step (c1).

Wakui in the same field of endeavor teaches executing the following steps;

(a1) continually illuminating the document with the light rays from the light source (Col. 5 lines 65-67 and Col. 6 lines 1-3 At least one set of LEDs is continuously illuminating the transparency object);

(b1) moving one of the document and the scan module by the predetermined distance from the other, and receiving a standard image signal of the document by utilizing the image sensor of the scan module (Col. 6 lines 55-65);

(c1) stabilizing the movement of one of the document and the scan module and consequently making the document and the scan module relatively stationary to each other after the step (b1) (Col. 7 lines 6-17); and

(d1) terminating the receiving operation of the image sensor after the image sensor has received the standard image signal for a second predetermined period of time after the step (c1) (Col. 6 lines 36-47 after scanning a successive scan line)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method as taught by Wakui wherein the document is continuously illuminated to acquire an image with the method as disclosed by Chung wherein scan quality is enhanced to utilize other means of illuminating the document which would speed the image

acquisition process if, for example, a fluorescent lamp is used because the fluorescent lamp would need to heat to a certain temperature before image acquisition could commence.

6. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshio Wakui (US 6563610 B1) in view of Nikolai R. Tevs (US 20020064300).

Regarding claim 6, Wakui discloses a scan method capable of enhancing scan quality, the scan method comprising the steps of:

(a) continually illuminating the document with the light rays from the light source (Col. 5 lines 65-67 and Col. 6 lines 1-3 At least one set of LEDs is continuously illuminating the transparency object.)

(b) moving one of the document and the scan module by the predetermined distance from the other, and receiving a standard image signal of the document by utilizing the image sensor of the scan module (Col. 6 lines 55-65);

(c) stabilizing the movement of one of the document and the scan module and consequently making the document and the scan module relatively stationary to each other after the step (b) (Col. 7 lines 6-17);

(d) terminating the receiving operation of the image sensor after the image sensor has received the stable image signal for a first predetermined period of time so that an image signal corresponding to a line of the document is obtained (Col. 6 lines 36-47. Electronic shutter provides for line-by-line image acquisition as described).

(b') moving one of the document and the scan module by the predetermined distance from the other (Fig. 7; scanning of successive scan lines until entire area has been scanned),

(c') stabilizing the movement of one of the document and the scan module and consequently making the document and the scan module relatively stationary to each other, and receiving another stable image signal of the document by utilizing the image sensor of the scan module after the step (b') (Col. 7 lines 6-17 for a successive scan line); and

(d') terminating the receiving operation of the image sensor after the image sensor has received the stable image signal for another first predetermined period of time so that another image signal corresponding to another line of the document is obtained (Col. 6 lines 36-47 after scanning a successive scan line).

However, Wakui fails to teach discarding an unstable image signal of the document and discarding another unstable image signal of the document (for the next scan line) by utilizing an image sensor of the scan module at the same time as the moving step.

Tevs, in the same field of endeavor, teaches discarding an unstable image signal of the [object] by utilizing an image sensor of a scan module ("In a preferred arrangement, the step of analyzing the values includes discarding one or more of the values corresponding to at least one of the subsequent sequential signals. This is done by detecting those values which are physically impossible or statistically improbable based upon data up to date" at paragraph [22]. The step of analyzing is performed after "processing" as described in paragraphs [11-13]).

It would have been obvious at the time the invention was made to one of ordinary skill in the art for the image acquisition method as disclosed by Wakui where LEDs provide continuous illumination to employ discarding an unstable image signal of the [transparency object] by

utilizing an image sensor of the scan module as taught by Tevs et al to compensate for the poor image signal data acquired while the document and the sensor are coming into contact with one another before becoming stationary. Applicant has not disclosed that moving a document and scan module by a predetermined distance from one another and discarding an unstable image signal "at the same time" provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with discarding unstable image signals during image processing as taught by Tevs et al or the claimed "at the same time" of image acquisition.

Regarding claim 7, Wakui discloses the scan method according to claim 6, wherein the step (b) comprises a step of:

feeding the document to generate the predetermined distance from the stationary scan module (Col. 7 lines 55-65).

Regarding claim 8, Wakui discloses the scan method according to claim 6, wherein the step (b) comprises a step of:

moving fine scan module by the predetermined distance from the stationary document (Col. 1 lines 28-36).

Regarding claim 9, Wakui discloses the scan method according to claim 6, wherein the image sensor has an electronic shutter (Col. 6 lines 44-47).

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wakui in view of Tevs and Fumikazu Nagano (US 5687003).

Regarding claim 10, Wakui (as modified by Tevs in the rejection of claim 6 above) discloses the scan method according to claim 6, further comprising the steps of:

(a1) continually illuminating the document with the light rays from the light source (Col. 5 lines 65-67 and Col. 6 lines 1-3 At least one set of LEDs is continuously illuminating the transparency object.);

(b1) moving one of the document and the scan module by the predetermined distance from the other, and receiving a standard image signal of the document by utilizing the image sensor of the scan module (Col. 6 lines 55-65);

(c1) stabilizing the movement of one of the document and the scan module and consequently making the document and the scan module relatively stationary to each other after the step (b1) (Col. 7 lines 6-17); and

(d1) terminating the receiving operation of the image sensor after the image sensor has received the stable image signal for a second predetermined period of time after the step (c1) (Col. 6 lines 36-47. Electronic shutter provides for line-by-line image acquisition as described)

Wakui fails to disclose or suggest receiving a first mode signal or a second mode signal selected by a user and executing steps (a) to (d) when the first mode signal is received and executing other steps when the second mode signal is received.

Nagano, in the same field of endeavor, teaches receiving a first mode signal or a second mode signal selected by a user ("It is therefore an object of the present invention to provide a

reader capable of selecting either the high-resolution mode or the high-speed mode and further enabling the read to be performed at higher speed in the high-speed mode and/or at higher quality in the high-resolution mode" at column 3 lines 5-9). If the sensor is incorporated with two selectable modes, the modes are communicated to the processing means via a signal.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate a user-selectable dual mode image reader as taught by Nagano in the scan method as disclosed by Wakui wherein the document is continuously illuminated to produce image documents according high quality or high speed reproduction as needed.

Response to Arguments

Applicant's arguments with respect to independent claims 1 and 6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jamares Washington whose telephone number is (571) 270-1585. The examiner can normally be reached on Monday thru Friday: 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on (571) 272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Art Unit 2625

Application/Control Number:
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January 28, 2008



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